

# MC generation plan for B-group for winter conferences

# Minimum plan: use 5.3.4

- Fix bugs and features.
  - SVX hits: some ladders not being turned off: see Matt's page (tracking) ✓
  - L00 hits right ✓
  - COT with dE/dx <-- status ???
- Migrate to HeavyQuarkGen if we can.
- Add TOF ✓
- SVT beamlines (as text OR database) for new runs (-- 0e datasets)
- XFT configuration (and muons) from database to allow multi-run job segments. ??
- Improve MC framework and converge a little more with other Physics groups.

# SVX bug fix

From M.H.:

[http://wwwcdf.fnal.gov/updates/computing/projects/reconstruction/tracking/tracking\\_status/current\\_problems.html](http://wwwcdf.fnal.gov/updates/computing/projects/reconstruction/tracking/tracking_status/current_problems.html)

The non-integrated ladders flag used in MC Production does not kill all classes of non-active ladders.

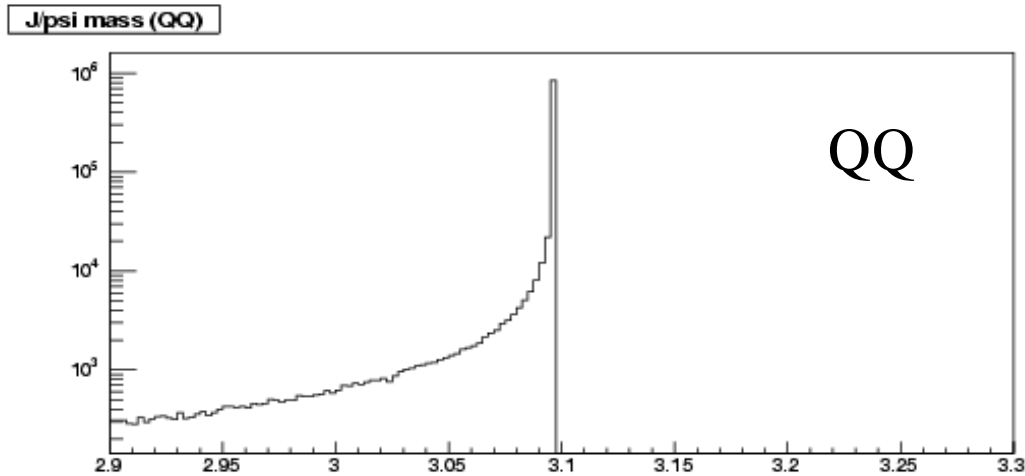
- Ladders where all of the stereo chips are dead (but not all the axial chips),
  - Ladders where the axial to stereo side power jumper is broken and
  - Chips where the threshold is set to prevent data taking
- are not flagged as non-active.

This primarily effects the stereo side and standalone tracking.

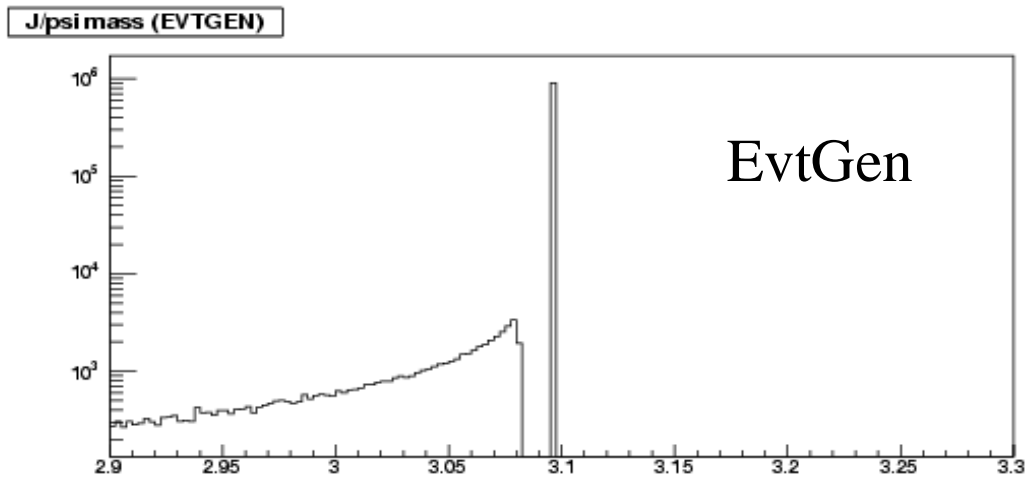
Fixed by checking out the following patch:

```
-r 1.4    SvxDaqObjects/SvxDaqObjects/Correctors/DBCorrector.hh
-r 1.6    SvxDaqObjects/SvxDaqObjects/Correctors/DBCorrector.icc
-r 1.4    SvxDaqObjects/src/DBCorrector.cc
-r 1.66   TrackingMods/TrackingMods/SiClusteringModule.hh
-r 1.175  TrackingMods/src/SiClusteringModule.cc
```

## Some new features:



... but... QQ has angular distribution wrong



It looks like there is a cutoff in photon emission in EvtGen

Hepg dimuon invariant mass

From Jaison Lee

We still need a EvtGen librarian

## MC generation programme for the B group

- Main driving force: Bs mixing
  - Other small signal MC made directly by users
- J/Psi stream:
  - 1 M events (after trigger) Pythia msel=1, 20% B\*\*, standard fragmentation. requested by Franco as a test run. Validator: Pierluigi. Status: 50% done (cnaf)
  - Plan for evaluating systematics using grid of MC parameters
- SemiLeptonic stream:
  - N events requested by Ilya/Masa. Status: tcl ready, setup ready, wait for 5.3.4 to get Pythia info. Features: Msel=1, 20% B\*\*, semileptonic decay only, Peterson fragmentation, re-weight events later. Validator: Denis. Status: waiting for 5.3.4
  - Karlsruhe MC sample: generic bbar lsvt sample in fcdpdata051
- Hadronic trigger:
  - Evaluate efficiency from sample J/Psi, make analogous requests, possible to use same setup initially.